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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,698	01/05/2004	Peter C. Williams	22188/06727	1697

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EXAMINER

PATEL, VISHAL A

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 08/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/707,698	Applicant(s) WILLIAMS ET AL.	
	Examiner Vishal Patel	Art Unit 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 30-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 30-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/25 and 7/14</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 10-11, 13-14, 30-31 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Kowal et al (US. 4,556,242).

The Kowal et al. coupling discloses in fig. 1 a tube fitting 10 having a fitting body 11 with a cylindrical bore 14 for receiving a tube end "T" and including a tapered mouth 13 at one end of the bore that forms a camming surface. A drive member 18 joinable with the body via threads 22, 23 and having a ferrule drive surface 20. A ferrule 24 has a tapered nose portion 28 that extends into the tapered mouth 13 of the fitting body 11 with a cylindrical interior wall 26 that closely surrounds the tube end "T" and a driven surface 37, 38 on a back end thereof that engages the ferrule drive surface 37,38. The ferrule has a rear portion of the cylindrical interior wall that is radially spaced from the tube end upon pull-up of the fitting. Compare figs. 1 and 2 wherein fig. 2 illustrates the rear portion of the ferrule in the pull-up position. A forward edge of the tapered nose portion 27 penetrates 29 an outer surface of the tube end "T" caused by radial inward compression of the forward edge as the tapered nose portion slides against the camming surface during pull-up (this is the case since the radial inward compression of the forward edge contacts the outer surface of the tube end) and a collet portion 24 or 30 of the substantially continuous cylindrical interior wall is axially behind the forward edge and upon pull-up of the

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fitting is deformed radially against the outer surface of the tube end to grip the tube end. The collet portion providing a swaged region which in longitudinal cross-section is convex portion of the cylindrical interior wall of high friction engagement between the nose portion and the tube outer surface (this is the case since the collect portion deforms radially inwardly to form a convex portion that contacts the outer surface of the tube). Again compare figs. 1 and 2 wherein fig. 2 illustrates the collet portion 24 or 30 of the ferrule being radially deformed against the tube. The outer surface of the tube and is compressed by the collet portion with high radial gripping pressure has shown by figure 2. As to claims 13, the drive member ferrule drive surface initially contacts the ferrule driven surface at a location radially outwardly to at least a central portion of the ferrule driven surface has clearly shown in figure 1. As to claims 14, the cross-hatching clearly indicates a metal composition. As to claim 31, see column 2, lines 45 to 55. As to claim 34, note that the driven surface at the back end of the ferrule is a convex curved surface.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-8, 12, 32 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 4,556,242 to Kowal et al. in view of U.S. patent 2,171,217 to Kreidel and U.S. patent 2,230,116 to Kreidel.

As noted above the Kowal discloses all of the features of the claimed device however it is not taught to case hardened the ferrule about its entire surface. The patent 2,171,217 to Kreidel

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and 2,230,116 to Kreidel both disclose that it is known in the prior art to provide a similar type coupling with the ferrule 10 of Kreidel '217 and the ferrule b of Kreidel '116 being case hardened (see Kreidel '217 page 2, column 1, lines 65-75 continuing to column 2, lines 1-10 and Kreidel '116 page 1, column 2, lines 15-50) in order to properly bit into the inserted tube. It would have been obvious to one having ordinary skill in the art at the time the invention was made to harden the ferrule of Kowal as taught in the prior art of either Kreidel '217 or Kreidel '116, in order to provide a more secure coupling for the inserted tube due to increased compressibility of the ferrule into the surface of the softer inserted tube and thereby insuring a steadfast connection.

5. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 4,556,242 to Kowal et al. in view of U.S. patent 5,954,375 to Trickle et al.

As noted above the Kowal et al. coupling discloses the claimed device however the inner surface of the ferrule is continuous and does not include a recess between the front portion and the rear portion. Trickle et al. discloses that it is known in the art to provide a similar type coupling with a recess 258 along the inner surface of the ferrule 218 (see fig. 15 and columns 10-11) for added gripping of the tube due to increased hinging of the ferrule. It would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate a recess in the inner surface of the ferrule of Kowal et al. such as taught by recess 258 of Trickle et al. in order to provide a more secure coupling for the inserted tube owing to increased compressibility of the ferrule due to the hinging effect of the front portion of the ferrule.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 4,556,242 to Kowal et al. in view of U.S. patent 4,304,422 to Schwarz.

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As noted above the Kowal et al. coupling discloses the claimed invention except for the particular material of the ferrule being stainless steel. It would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the ferrule from a well known corrosion resistance material such as stainless steel such as disclosed by Schwarz in column 4, line 47 that it is known in the art to construct a similar type ferrule in a similar type coupling from stainless steel in order to improve the couplings resistance to corrosion and since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

7. Claim 9 is rejected under 35 U.S.C. j 103 as being unpatentable over U.S. patent 4,556,242 to Kowal et al. in view of U.S. patent 2,171,217 to Kreidel and U.S. patent 2,230,116 to Kreidel as applied to claims 1-8,12,17,22,25,32 and 35 above, and further in view of U.S. patent 4,304,422 to Schwarz.

As noted in the above rejection the combination of Kowal et al. and Kreidel '217 and Kreidel '116 discloses the claimed invention except for the particular material of the ferrule being stainless steel. It would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the ferrule of Kowal et al. from a well known corrosion resistance material such as stainless steel such as disclosed by Schwarz in column 4, line 47 that it is known in the art to construct a similar type ferrule in a similar type coupling from stainless steel in order to improve the couplings resistance to corrosion and since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its

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suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Response to Arguments

8. Applicant's arguments filed 6/15/05 have been fully considered but they are not persuasive.

Applicants' argument that Kowal does not teach the added limitation to the claims is not persuasive because as noted above that Kowal does teach a first radial compression that is caused to the front edge and a subsequent portion of the cylindrical interior wall to have a convex portion adjacent to the front edge.

Applicants' argument that Kowal does not teach an additional deformation as recited in the claims is not persuasive because as noted in column 4, line 56 to column 5, line 19. Furthermore, when the nut is placed on the threads of 11, the ferrule will initially deform and then a further deformation is produced as the nut is advanced on the threads of 11.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Johnston and Zahuranec.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 571-272-7060. The examiner can normally be reached on 6:30am to 8:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP
August 12, 2005

A handwritten signature in black ink, appearing to read 'Vishal Patel', with a stylized flourish at the end.

Vishal Patel
Patent Examiner
Tech. Center 3600